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# Factors Affecting Procurement Performance of Public Hospitals in Kenya: A Case of Coast General Hospital (CGH)

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### ABSTRACT

Public procurement is crucial to government service delivery. For decades procurement performance has been attracting great attention from practitioners, academicians and researchers due to poor levels of performance. Despite Government efforts for improvement, it is still marred by shoddy works, poor quality goods and services. Stakeholders complain about poor service delivery. Benefits deriving from improved procurement performance at Coast General Hospital (CGH) are dependent on systems and staff. The general objective of this study was to assess factors affecting procurement performance in public hospitals in Kenya with specific focus on the CGH. This study analyzed the factors affecting procurement performance in the public hospitals in Kenya. The research aimed to establish how procurement staff training, procurement information communication technology, supplier management and procurement ethical practices affect procurement performance of the public hospitals in Kenya. The literature review introduced theoretical literature, conceptual framework, empirical literature, critique of existing literature, summary and research gap. Various theories like Principal-Agency theory, Technology Acceptance Model, Transaction Cost Economics Theory, and Technology Diffusion Theory have been incorporated to enhance theoretical understanding of this study. Descriptive research design was used and a stratified random sampling method was used to pick a sample of the respondents who were provided with the questionnaires. The target population comprised of 74 employees from the CGH. In collecting the data, open-ended and closed-ended questions were used. A sample of 62 respondents from within each group in proportions that each group bear to the population as whole was taken using Slovin's formula:  $n = \frac{N}{1 + Ne^2}$ . The data collected was analyzed by use of descriptive and inferential statistics. The quantitative data generated was keyed in and analyzed by use of Statistical Package of Social Sciences (SPSS) that generated information which was presented using tables, frequencies and percentages. The multiple regression model was used to show the relationship between the dependent variable and the independent variables. The regression analysis showed that supplier management was the most related factor affecting procurement performance in public hospitals in Kenya with the strongest positive (Pearson correlation coefficient = .834) effect on procurement performance of public hospitals. In addition, staff training, ethical practices, and information communication technology were positively correlated to procurement performance of public hospitals with Pearson correlation coefficient of .761, .717 and .685 with p-values of  $.002 < 0.05$ ,  $.003 < 0.05$  and  $.060 < 0.05$  respectively. However, the study established that information communication technology was the least related factor affecting procurement performance. The study recommends that the management of public hospitals in Kenya should therefore adopt supplier management, procurement staff, ethical practices and information communication technology thus ensuring value for money, improved quality service, reduced delivery time and effective procurement performance.

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### Introduction

According to Public Procurement and Disposal Act (2015) "Procurement" means acquisition by purchase, rental, lease, hire purchase, license, tenancy, franchise, or any other contractual means, of any type of works, services or supplies or any combination. Procurement encompasses the whole process of acquiring property and/or services. It begins when an agency has identified a need and

decided on its procurement requirement. Procurement continues through the processes of risk assessment, seeking and evaluating alternative solutions, contract award, delivery of and payment for the property and/or services and, where relevant, the on-going management of a contract and consideration of options related to the contract. Procurement also extends to the ultimate disposal of property at the end of its useful life (Chopra S. et al, 2010).

According to Roodhooft & Abbeele (2006), public bodies have always been big purchasers, dealing with huge budgets. Mahmood, (2010) also reiterated that public procurement represents 18.42% of the world GDP. In developing countries, public procurement is increasingly recognized as essential in service delivery (Basheka & Bisangabasaija, 2010), and it accounts for a high proportion of total expenditure. For example, public procurement accounts for 60% in Kenya (Akech, 2005), 58% in Angola, 40% in Malawi and 70% of Uganda's public spending (Wittig, 1999; Government of Uganda, 2006) as cited in Basheka and Bisangabasaija (2010).

For decades procurement performance has been attracting great attention from practitioners, academicians and researchers due to poor performance. Adoption of e-procurement has rapidly increased since 1990s; yet organisations still face challenges associated with its advent and use. Analysis by Wyld (2004) showed that in the United States only 30% of firms surveyed use e-procurement systems for request for quotations (RFQ), online auctions (25%) and e-markets (33%). Despite evidence showing advantages of e-procurement systems, many organisations are still reluctant to embrace it.

In Africa, challenges that engulf public sector procurement are skill development; effective recruitment and retention of procurement professionals among many more. Another challenge is the management of global sourcing strategies. That is also a challenge in terms of processes, a linkage between the global sourcing offices (Jason, 2006). Juma (2010) asserts that, even in private sector as in the government tenders, bribery and corruption is rife in procurement field. The author states that the problem is that integrity has never been a guarantee from professionals. Banda (2009), however observes that factors affecting procurement performance in developed and in developing countries are different. "Public sectors in Africa are grappling with setting up the operational framework of procurement processes while developed countries as United States and European Countries the problem is how to make it efficient".

In Kenya, public sector procurement functional unit suffers from different challenges drawn from internal and external factors in organization. Attracting and retaining talent in the procurement space is among the top concerns for organizations already dealing with today's complex pricing pressures Berger & Humphrey (2007). According to Dale (2010), for most of organizations, procurement is still seen as add on rather than core to business operations. This therefore affects the level of investment and resource allocation towards procurement function in the public sector. In today's complex global economy, the procurement function in public sector in Kenya must respond to a number of difficult issues, in no small part compounded by the recent economic turmoil and the changing dynamics of the global supply chain (Jason, 2006). With so much at stake it obviously makes sense to fill key procurement roles with seasoned employees that have a keen understanding of how the commoditization process works in today's environment of increasing complexity across the supply chain. Overall, inhibiting factors to procurement performance in Kenya must be looked into holistically by public sector and other stakeholders if value is to be added in procurement processes and activities (Jason, 2006)

Procurement performance is the backbone of an organization success since it contributes to competitive purchase and acquisition of quality goods that puts the organization products or services in the competitive edge in the market. However, on several occasions, poor procurement performance has caused public sector financial loss due to delivery of poor quality work materials, loss of value for money and inflated prices. Poor procurement performance also contributed to decrease of service delivery of public sector (Juma, 2010).

According to (Migai, 2010), poor procurement performance is a major hindrance to public sector organizations growth since it causes the delay of delivery, increase of defects, delivery of low quality goods or non delivery at all. Poor procurement performance in the public sector has been a problem due to incompetent staff, traditional procurement procedures, and inability to embrace e-procurement, poor coordination of procurement activities, lack of quality assurance policies and lack of proper regulations Juma (2010).

The public health sector in Kenya is primarily involved in the provision of affordable and easily accessible health services to the citizens. There are a number of public hospitals operating in the country, with the most established being Kenyatta National Hospital, Moi Teaching and Referral Hospital, New Nyanza Provincial Hospital, Coast General Hospital and many more middle and small sized public health centers and dispensaries across the country.

Staff training for procurement professions is critical in ensuring that staff members are abreast of current trends in procurement like globalization and global outsourcing. Regular staff training and development would enrich the staff with the many available procurement practices that they can adopt to improve procurement performance. In supplier management, choosing a supplier based solely on competitive pricing is often viewed as short-sighted and may be ineffective. Building a long-term relationship with a reliable supplier can result in better customer service and prove to be more cost effective over time. One of the most widely discussed procurement practices is the use of e-procurement. E-procurement is an electronic method of purchasing supplies and services. Organizations that purchase e-procurement software are able to receive product and service payments online. According to Thai (2001), the ethical practices are those moral practices within which procurement professionals and program managers implement their authorized and funded procurement programs or projects/ activities.

A central objective of effective procurement management is to create a major source of competitive advantage for the organization to differentiate itself in the eyes of the customers from its competitors by operating at a lower cost and hence at a greater market share (Christopher, 2006). The measures of the procurement performance construct to be used in this study are value for money, flexibility, quality, effectiveness, cost saving, reduced delivery time and customer satisfaction. Effective procurement management may enhance a firm's flexibility, which could be defined as the firm's ability to adapt to the changes in its day to day business environment.

Research by Chopra et al. (2010) has described procurement practices and how these positively affect procurement performance in terms of cost, time, satisfaction, quality, flexibility and value. Given the current and projected expenditures in procurement as well as the

increasing importance of the purchasing function in contributing to firm efficient and effective operationality, it is important for firms to employ a systematic means of deciding which procurement practices will contribute most to the attainment of corporate goals (Oyuke, O. H & Shale, N. 2014). Similarly, Delaney et al, (2006) assert that procurement performance can be evaluated by quality service and products, satisfying customers, market performance, service innovations, and the employees can be appraised by the following “dimensions of performance: service quality, customer satisfaction, margin on number of clients, and capacity utilization.

CGH was founded in 1905 as a native civil hospital in the Makadara area of Mombasa Island. Then it had only eight wards manned by whites and Asian doctors and a multinational staff of nurses and other support staff. In 1958, the new group hospital was renamed Coast Provincial General Hospital and expanded to include an administration block and inpatients' wards. In 1971, the ministry of health took the municipal council owned lady Grill maternity hospital and made it part of Coast General Hospital. At about the same time, another adjacent maternity home owned by the Ishmael Rahamutulla trust was donated to Coast General Hospital. Today it is an amenity ward.

In 1981, the Government of Kenya (GoK) commissioned a new wing housing medical and surgical specialized clinics as well as eye, ENT and dental clinics. The new wing also incorporated the department of physiotherapy, operating theatres with a CSSD section, an ICU, an x-ray department, casualty with trauma theatre, a laboratory, a paediatric ward a mortuary.

Today CGH is the second largest public hospital in Kenya after Kenyatta National Hospital with a 700 bed capacity. It presently has 672 beds comprising 546 beds and 126 cots. It is a teaching and referral hospital whose service area comprises the six counties in Coast region and beyond. CGH recently also opened an ultra-modern 12 bed Intensive Care Unit (ICU) and a three bed High Dependency Unit (HDU). The facility caters for a primary area population of over 1 million people and a secondary population of about 3 million.

This is a busy teaching hospital for doctors, nurses, clinical officers and various other university courses. There are some 800 staff members including 25 very elusive consultants and some 45 medical officers. It has four medical, three surgical and three paediatric wards. There are several theatres, ITU facilities and an orthopaedics department. There is also a separate Obstetrics and Gynecology department, combined with a renovated Millennium Labour Ward and obstetric theatres. Many specialist clinics for TB, HIV, etc. are run within the hospital. There is a CT scanner and dialysis unit. The A&E department is overwhelmingly busy 24 hours a day but has its own pharmacy and lab.

Coast General Hospital (CGH) also has a supplies department where all procurement activities are conducted. The Supplies department is managed by the Head of Supplies who oversees all activities in the department. This department is further sub-divided into Stores and inventory division; and Procurement division. Thus, the later division is charged with the responsibility of buying all the hospital pharmaceutical and non-pharmaceutical materials, equipments, and even services by focusing on value for money and ensuring efficiency in the hospital's routine operations.

Vision 2030, Kenya's long term development blueprint posts health as one of the social pillars that play a key role in maintaining health and skilled manpower. To realize this goal, the health sector defined improved procurement practices and availability of essential health products and technologies as a priority reform besides digitization of records, equipping health facilities and infrastructure development.

Public procurement is key to government service delivery, yet many constraints do affect its performance. Procurement is perceived as prone to corruption; occasioning waste and affecting quality of service and life improving opportunities. Regardless of the enactment of the Public Procurement and Disposal Act, 2015 and operationalisation of various regulations to improve performance of the procurement function, public procurement in Kenya is marred by corruption scandals and losses amounting to billions of shillings. Over 80 percent of corrupt practices in Kenya still occur in public procurement (KACC Perception Survey 2010).

Cases of procurement malpractices include the Anglo Leasing, the NSSF civil servants' medical cover scheme, IEBC BVR kits, the NSSF Tassia estate scandal, the standard gauge railway are among those that have dominated the media and public discourse. The Mars Group (2011) estimates the recent grand corruption scandals have cost the country over KSh.700 billion (USD 8.24 billion). According to KACC Report (2001), billions of shillings of public funds were lost in a police procurement activity involving the supply of 520 Hyundai motor vehicles worth US\$ 10 million that were never delivered despite payments having been made. Kenya Police Service is ranked as the most corrupt institution in Kenya in all aspects including procurement (Transparency International Report, 2013).

There is need to reverse this worrying trend and win public confidence. Despite Government efforts to improve the procurement system, it is still marred by shoddy works, poor quality goods and services. Improper implementation of recommended performance standards results in unnecessarily high operation costs, uncoordinated business activities, inability to achieve domestic policy goals, and failure to attract and retain professionals. Suppliers complain about the capability of public sector buyers.

The purpose of this research was to investigate the Factors Affecting Procurement Performance in Coast General Hospital. Given the current and projected expenditures of 70% in procurement as well as the increasing importance of the purchasing function in contributing to firm cost saving by over 25%, it is important for firms to employ a systematic means of deciding which procurement practices will contribute most to the attainment of corporate goals. According to Chopra (2010), if a firm uses a procurement tool solely to keep pace with its competitors, and without regard to how it fits into its corporate strategy, the outcome may be less than optimal. The attainment of Kenya vision 2030 is highly dependent on prudent procurement management and as such public hospitals should be on high alert to curb the massive wastages experienced by government agencies which are likely to retard economic growth and achievement of vision 2030.

The procurement function in CGH is characterized by late delivery of supplies, very high procurement budget, suppliers' complaints due to poor supplier relationships and late payments. It's against this that this study is being undertaken to investigate the Factors Affecting Procurement Performance in Coast General Hospital.

### Research Objectives

This study was guided by the following specific objectives:

- 1) To determine the effect of staff training on procurement performance in Coast General Hospital.
- 2) To explore the effects of information communication technology on procurement performance in Coast General Hospital.
- 3) To establish how supplier management affect procurement performance of Coast General Hospital.
- 4) To analyze the effects of ethical practices on procurement performance in Coast General Hospital.

### Related Literature

#### Theoretical Review

Studies in factors affecting procurement performance mainly in supplier management and evaluation have been largely dominated by mathematical models which try to rate and rank suppliers based on a number of pre-defined factors such as cost, quality, service, and delivery. However, in this era of new trends in products and services outsourcing, there is an increasing need to employ theories from other relevant disciplines such as economics, strategy, and organizational behavior to procurement management and supplier management/evaluation/development research. Although cost, quality and delivery are still the main supplier selection/evaluation criteria and the centre of supplier development programmes. Among influential theories in procurement management studies are Principal-Agent Theory (PAT) and Transaction Acceptance Model (TAM). Both have made valuable contributions in understanding business phenomena for years and have been considered in procurement and supply chain studies more recently, also the transaction cost economics theory and Technology diffusion theory are discussed.

#### Principal-Agent Theory

The Principal-Agent Theory is the underpinning theory used to establish the framework for this study. The Principal-Agent Theory is an agency model developed by economists that deals with situations in which the principal is in position to induce the agent, to perform some task in the principal's interest, but not necessarily the agent's (Health & Norman, 2004). Several studies among them (Eisenhardt, 2003) have contributed to the literature on principal agent theory. All these contributions have one main theme which is the relationship between a principal and an agent.

The Principal-Agent Theory concerns with the arrangement that exists when one person or entity (called the agent) acts on behalf of another (called the Principal). The principals contracts the agent to perform some services on the principal's behalf. These contracts require the agent to exert effort and make decisions. For example shareholders of a company (principals) elect management (agents) to act on their behalf, and investors (principals) choose fund managers (agents) to manage their assets. That is the management make operational decisions on behalf of the company shareholders for instance maximization of revenues and minimization of costs among other decisions. With this

relationship, the principal engages the agent who acts and makes decisions on behalf of the principal (Eisenhardt, 2003) This relationship works well when the agent is an expert at making the necessary decisions, but does not work well when the interests of the principal and agent differ substantially.

In general, a contract is used to specify the terms of a principal – agent relationship. According to Eisenhardt (2003), Agency theory is directed at the ubiquitous agency relationship in which one party (the principal) delegates work or tasks to another party (the agent) who performs that work. Agency relationships are enacted in a broader social context for the adoption of policies about aligning incentives in order to discourage self-interested behaviour by managers and reducing agency costs. A number of studies have shown that procurement contributes about 60%-70% of an organization's expenditures.

Following the operational nature of procurement expenditures, decisions must be taken by the organization's management (agents) on behalf of the company owners (principals) under the power entrusted to them through their employment contracts. The theory also answers two specific problems that is, the goals of the principal and agents are not in conflict (agency problem) and that the principal and agent reconcile different tolerances for risk. The principals and agents seek to maximize their utility from the same organizations.

As the shareholders seek to maximize their wealth in form of profits (dividends) made by the company, management too seeks to maximize their utility by way of earnings. Also, because of the different roles of these two parties in the organization, the risk tolerance levels differ. As the shareholders' risk appetite levels are normally low because of the need to protect the value of their wealth, management normally tolerate higher risk; these are normally reconciled in order for the company to operate well. Procurement management is an essentially risky function that involves management decisions in optimally allocating the limited resources that are provided by the shareholders hence the need to minimize the involved risks so as us ensure

#### Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is a theoretical model that explains how users come to accept/adopt and use a technological infrastructure. The model suggests that when a user is presented to a new technology, a number of factors influence their decision regarding how and when they will use it. This includes its perceived usefulness and its perceived ease of use. This model adopts well established causal chain of "beliefs, attitude, intention, actual behaviour", which was developed from the theory of reasoned action by social psychologists. In Davis's study, two important constructs are identified; perceived usefulness and perceived ease of use. The perceived usefulness (PU) is defined as "the degree to which an individual believes that using a particular system/technology would enhance his/her performance" (Davis et al 2002).

The perceived ease of use (PEU) is defined as "the degree to which an individual believes that using a particular system would be free of physical and mental efforts". These perceptions predict attitudes toward the system/technology adoption. Then the attitude develops the intentions to use and the intentions cause actual

system usage. In many recent studies regarding technology, TAM is adopted extensively. TAM was adopted and showed that it contributes to the prediction of individual usage of technology.

Perceived ease of use of an infrastructure has a direct effect on it perceived usefulness and both determine the consumer's attitude toward use, which leads to behavioral intention to use the system and actual use of the system (Davis et al, 2002). The model supports adoption of ICT on effective procurement management in health projects.

### Transaction Cost Economics Theory

This theory addresses questions about why firms exist in the first place (i.e., to minimize transaction costs), how firms define their boundaries, and how they ought to govern operations. According to Patrick, (2010) TCE was originally developed to help to determine the efficiency of governance structures in the private sphere. Yet, Williamson (2006) already addressed public utility services and the importance of transaction costs in the public sector when analyzing bidding process. According to Simon and Evenett (2005), parties have to bid for the right quality of goods and services and the award has to go to the bidder offering the lowest price. Cronbanch (2011), argues that the problems associated with contracting solutions in the types of environments encountered in public utility transactions are likely to be difficult to tackle.

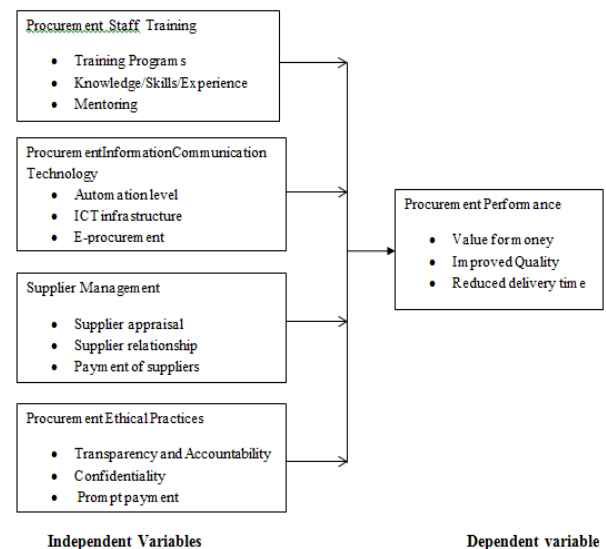
Firstly, where competitive bidding can indeed be an effective way of determining the lowest cost supplier when the price of the good or service being procured is the buyer's only concern, it works less well for complex goods and services where the buyer cares more for the quality, reliability, and other attributes of the procurement (Tukamuhabwa, 2012). Secondly, because supplying public utility services typically requires large, durable investments in production and distribution facilities that are specialized to a particular market, the efficient governance of public utility transactions is likely to require long-term contracts to avoid the hazards of repeated haggling over the terms of trade once those investments are in place (McCrudden, 2008). Finally, uncertainty about cost and demand conditions over such long horizons and the complexity of public utility services will leave long-term contracts for public utility services inevitably incomplete (Tukamuhabwa, 2012).

### Technology Diffusion Theory

The origin of diffusion theory is attributed to a French sociologist, Gabriel Tarde in 1903. It centers on the conditions which increase or decrease the likelihood that a new idea, product or practice will be adopted by members of a given culture. Diffusion of innovation theory predicts that media as well as interpersonal contacts provide information and influence opinion and judgment. Rogers (1995) argued that it consists of four stages: invention, diffusion (communication) through a social system, time and consequence. The information flows through networks. The nature of the networks and the roles opinion leaders play in them determine the likelihood that the innovation will be adopted. With today's emphasis on cutting costs, streamlining expenses while at the same time trying to offer a competitive edge with regard to customer service, many organizations are looking to improve their bottom line and organizational performance by implementing new technology into their supply chains (Esposito & Passaro, 2013).

Most companies invest mostly in information when it comes to streamlining the supply chain management. Recently the concepts of e-procurement and management have become a popular operations paradigm (Chopra et al., 2010). This has intensified with the development of information and communication technologies (ICT) that include electronic data interchange (EDI), the Internet and World Wide Web (WWW) to overcome the ever-increasing complexity of the systems driving buyer supplier relationships (Esposito & Passaro, 2013). The complexity of procurement process has also led companies to go for online communication systems. For example, Internet provides richness of information, greater interactivity between the firm and the customer.

### Conceptual Framework



**Figure 2.1 Conceptual Framework.**

The conceptual framework shown in figure 2.1 describes the relationship between the variables in the study. The independent variables are staff training, information technology, supplier management, and ethical practices. If these factors are aligned with the procurement operations of public sector it will improve performance of procurement by enhancing information flow, reducing delays in order processing thus leading to realizing value for money, improved customer service, improved quality, reduced delivery time, reduced cost. Organizations that invest in staff training are likely to have competitive advantage over the other as this may result to quality product and variety reduction. Procurement performance, the dependent variable is defined as accomplishment of employees task that result to customer satisfaction, efficient information flow and quality procurement management. This study seeks to establish the effect of such mentioned factors on performance of procurement in public hospitals in Kenya. Performance improvement will be assessed in terms of quality, cost, delivery time, customer satisfaction and benefits of information technology to be applied in every buying process. The study assumes that procurement performances are not affected by the CGH services, human resource management systems in place and organizational culture which are control factors.

### Procurement Staff Training

Saunders (2007) believed that successful functioning of organizational structures and effective operation of planning control systems is dependent on the quality and ability of staff employed. Strategic plans should

include information on the acquisition, development, use and reward of human assets. Plans need to take into account the current state of development of the procurement function and the strategic direction in which its state might change. Multi-skilling provides employees with a variety of skills and should be developed extensively. Training is beneficial and generates more than the equivalent cost in payback. To further the goals of value-based management, all employees need broad and continuous education and training. Education, training and professional development should be skill, process oriented and continuous.

Leenders and Fearon (2008), noted that the large number of items, huge monetary volume involved, need for an audit trail, severe consequences of poor performance, and the potential contribution to effective organizational operations associated with the procurement function are five major reasons for developing a sound, professionally managed procurement system. They further argue that qualifications are crucial for value-based management which requires employees to assess and improve processes while contributing to team performance. In addition, qualifications enhance staff ability to perform, enabling them to make better decisions, work as a team, and adapt to change, while increasing efficiency, quality, productivity and job satisfaction. Training is often for improving immediate work while education develops people for the long term. To enable individuals to create value consistently, both education and training are needed. Cousins (2008), stressed that with the ever increasing popularity of purchasing partnership philosophy, organisations must take a closer look at the educational levels of procurement staff. With procurement's perceived movement from a clerical service to a strategic business function, the calibre of staff in terms of training, education and skills must increase to fulfill its strategic potential. The author asserted that employees need to learn new skills for improving work performance.

Procurement comprises a wide range of SC processes such as management of value analysis processes, supplier negotiations and quality certification; and supply market research as well as early supplier involvement in processes such as development of specifications and purchase of inbound transportation. This calls for higher professional skills for enhanced performance.

Baily et al. (2005) propounded that knowledge of the mission, the existence of top-down objectives with related performance measures, and process guidelines link individual or group performance to the firm's goals and expectations of upper management require good qualifications. The use of teams, cross-functional managers, broad process and linkage oriented job responsibilities, and extensive information systems enable individuals to balance conflicting objectives and improve processes. Professional qualifications are the fulcrum around which performance turns. Without well-motivated, able and well trained staff, even the more brilliantly conceived plans and strategies can fail. A motivated team whose members work for and with each other can beat a team of less motivated people even if they are greater in talent. To improve procurement performance, it is essential to understand the roles that are to be performed, the standards to be achieved and how performance is evaluated.

Understanding is what allows an employee to become an innovator, initiative taker, and creative

problem solver in addition to being a good performer on the job, (Goetsch & Davis, 2006). They list benefits of training as improved productivity, quality, safety and health, communication and better teamwork. The value-based procurement management paradigm requires a rethinking of the management of human resources. Education must cross necessary boundaries and motivate procurement team performance. However, simply possessing knowledge is less important than applying it. Attention should be moved to skills of doing jobs and demonstrating competences. Noble (2011) argued that all chartered bodies such as the Chartered Institute of Purchasing and Supply (CIPS) are set up for the benefit of the public, because that is what professionalism is all about. It is both recognition and an expectation that professionals, through their expertise and commitment have a beneficial impact on society and corporate life. It is about promoting best-in-class procurement in organizations, whether responsible management of environment or helping out to stamp out corruption. Meanwhile, according to Maude (2011), many procurement professionals across government lack capability and market knowledge; and process-driven.

Boyan (2003) reveals that there are clear benefits in ensuring that staff who handle suppliers are professionals and approaches are handled well. Competence can ensure that the benefits of new products and services are brought to the attention of the right person in the organization. It can protect the organization, keep work to a minimum, avoid souring relationships and add to the organization's reputation for efficiency and good management. According to the author, in procurement, it is not what you do but how you do it that matters. "For big projects the cost of employing advisers is very high and in many cases exceeded budgets by a substantial margin. Procuring organizations need to drive down advisers' costs and ensure that sensible budgets are adhered to. They also need to be mindful of costs to bidders. Imposing excessive costs on bidders is likely to result in higher charges in the long run and risk deterring firms from bidding" (Boyan, 2003).

#### **Procurement Information Communication Technology**

Saunders (2007) reckoned that personnel in procurement are, in a sense, information processors. They receive, analyze, make decisions and distribute information in order to manage the flow of goods and services in the SC. ICT is an enabler for information sharing which organisations in the procurement system can use for eliminating bloated inventory levels caused by cumulative effect of poor information cascading up through a SC. Daugherty, Myers and Autry (1999) asserted that information integration is also a key component in many automatic replenishment programs (ARP). Initiatives such as vendor managed inventory (VMI) and collaborative planning, forecasting and replenishment (CPFR) are based on an increased level of automation in both the flow of physical materials, goods and associated information between companies to improve the efficiency in the entire system. It shortens information processing time and tremendously improves procurement performance.

Process integration can enhance procurement performance. ICT provides new ways to store, process, distribute and exchange key information with customers and suppliers in the entire procurement system. Simatupang and Sridharan (2005) emphasized that information is the glue that holds organisations together and can be used to integrate

procurement process activities both within a process and across multiple processes. Information on demand, forecasting and replenishment is recognized as a central component in integration of planning and control. Internal integration focuses on cross-functional processes. Externally, focus is on relationships with outside customers and suppliers. A relationship can have various intensity levels ranging from lowest open-market negotiations, cooperation and coordination to the highest collaboration level.

Collaboration in procurement is based on a high degree of trust, commitment and information-sharing. It requires linking performance systems with decision making, information sharing and incentive alignment in the SC. Sriram and Stump (2004) reckoned that enterprise resource planning (ERP) systems are essential for supporting internal information sharing. Externally, inter-organizational information systems (IOIS) constituting automated information systems shared by various firms can be used to support information-sharing with customers and suppliers. ICT contributes to improved communications patterns, increased demand for coordination of joint activities and new organizational structures through its ability to store, transmit and process information and speed up inter-organizational activities. Organisations have huge amounts of raw procurement data but are poor at converting same into market knowledge. They should strive to find trends, patterns and connections in data in order to inform and improve competitive procurement performance.

Thomas and Rainer (2005) asserted that procurement systems have long been supported by ICT. With the implementation of ERP systems in the 1990s, EDI connections with suppliers were established through automation of delivery schedules by linking user materials management system with supplier systems. ICT enables organisations to decentralize operational procurement processes and centralize strategic ones due to higher transparency. Prior to e-procurement, strategic procurement often dealt with routine tasks such as individual transactions. Strategic aspects were frequently neglected, with the buyer having little influence over the choice of suppliers and purchased products. Internet technologies facilitate faster and more efficient operational procurement processes enabling managers to concentrate on strategic tasks.

Christopher (2005) contended that there is a dimension to information that enables supply and demand to be matched in multiple markets, often with tailored products, in ever-shorter time frames. This enables suppliers to react in real-time to market changes. ICT serves as the connection between various stages of the system, allowing them to co-ordinate and maximize total supply profitability. It is crucial to the daily operation of each stage in the procurement process. Kim and Rogers (2005) asserted that studies have examined business-to-business (B2B) transactions on different operational performance dimensions such as inventory cost, cycle time, and manufacturer flexibility. Rapid growth of importance of ICT application is a testimony to its impact on improving procurement performance. This is achieved through Internet, Intranet and Extranet. However, organisations must make a trade-off between efficiency and responsiveness.

Chopra, Meindl, and Dhamram (2007) asserted that ICT provides a collaboration platform by allowing customers and suppliers to work together on product design

using specialist ICT design tools. Value chain integration may be made possible if separate activities can be knitted together by faster and more reliable information flows. Integration allows customers to change their specification and delivery schedules themselves which then automatically reconfigures requirements back in the procurement system. ICT can allow managers and external stakeholders to bypass traditional gatekeepers who gained power from their control of information. ICT-based systems can also create direct communication between the top and bottom of an organisation through use of in-house websites. This helps organisations reduce transaction and production costs and achieve operational efficiency.

Kenth and Vahid (2008) found that ICT drives e-markets to increase the availability of information about suppliers who are made available for each product and increase market interest for parties, reduce procurement costs and support paperless transactions. It enables users to buy at lower prices worldwide. Offers of companies on their websites enable customers to choose between a variety of products and retailers. Products can be customized before shopping and warehousing related costs reduced due to direct delivery. Dell and Amazon work this way. The global setting includes higher cultural distance and geographical complexity, lower behaviour transparency and social difficulties in bonding between procurement channel partners. Thus, ICT could be a more effective procurement performance coordination and control mechanism than personal face-to-face interaction in international exchange relationships.

#### **Supplier Management**

Supplier management is a business process that allows an organization to adequately select its vendors and negotiate the best prices for goods and services that it purchases. Senior managers also monitor the corporate supply chain to ensure that vendors familiarize themselves with the company's operating activities and manufacturing processes (Lysons and Farrington, 2012). According to Peters (2011) argues that SRM managers should be responsible for managing no more than three supplier relationships, in order to devote sufficient time to each. Staff involved in SRM activities will have a good combination of commercial, technical and interpersonal skills. Commercial acumen, market knowledge, analytical abilities and project management expertise are important. But "softer" skills around communication, listening, influencing and managing change are critical to developing strong and trusting working relations. SRM managers understand their suppliers' business and strategic goals and are able to see issues from the supplier's point of view, while balancing this with their own organizational requirements and priorities.

Supplier involvement in product development allows firm to make better use of their suppliers capabilities and technology to deliver competitive products. Coordinating operational activities through joint planning also results to inventory reduction, smoothing production, improve product quality, and lead time reduction (Chopra et al, 2007)

Lyson and Farrington (2012) contends that supplier relationship management is a comprehensive approach to managing an enterprise's interactions with the organizations that supply the goods and services it uses. The goal of supplier relationship management (SRM) is to

streamline and make more effective the processes between an enterprise and its suppliers just as customer relationship management (CRM) is intended to streamline and make more effective the processes between an enterprise and its customers.

### **Procurement Ethical Practices**

Procurement ethics are guidelines or best practices that embody ideals and responsibilities that inform procurement practitioners as to the principles and conduct they should adopt in certain situations. Some ethical issues relating to suppliers include provision of practical advice, prompt payment, honesty and openness, e-ethics and courtesy to supplier representatives (Lysons & Farrington, 2012).

Organizations like individuals have ethical standards and ethical codes (Peter & Bailey, 2005). The ethical standards of an organization are judged by its actions and the actions of its employees, not by pious statements of intent put out in its name. The pressures which the market place exerts on purchasing departments and on individual buyers make it essential that top management, purchasing and supply managers, buyers and all other members of the procurement system recognize and understand both professional and ethical standards required in performance of their duties.

Ethics in Public procurement provide advice and guidance to buying organizations on how to develop ethical purchasing practices in their supply chains (Lyson & Farrington, 2012). Although intended primarily for buyers, this guidance applies equally to anyone who has responsibility for managing the supply of goods or services from an external source. It has become essential for public organizations to have an ethical policy or code of conduct in procurement functions (Amstrong & Sweeney, 2004).

Suppliers' confidential information must not be disclosed to any third party or used in any way without the consent of the supplier (Trevino & Weaver, 2003). In particular, it must not be shared with other suppliers. This is particularly important when an output-based specification is being developed. Although it is acceptable business practice to share ideas amongst suppliers in order to develop the most appropriate solution, suppliers' confidence should be respected.

Purchasing and supply management professionals should encourage colleagues to declare any material personal interest which may affect, or be seen to affect, their impartiality or judgment in respect of their duties. Examples include owning a significant shareholding in a supplier or close family members being employed by a key supplier. Organisations should have a clear policy on accepting business gifts (Trevino & Weaver, 2003). Purchasing and supply management professionals should encourage colleagues to comply with any such policy.

Value for money is the core principle underpinning public procurement, incorporating ethical behavior and the ethical use of resources. The application of the highest ethical standards would help ensure the best achievable procurement outcome. It entails more than just getting price ethics are important when considering value for money (Mlinga, 2004). Ethical behavior and good probity practices enhance the procuring entities reputation in the market place. This increases business confidence in procurement processes, and is likely to maximize the number of suitable responses for future tenders.

According to Kothari (2004) emphasizes on procurement ethics being important in procurement for the following

reasons: procurement staffs are the representatives of their organization in dealing with suppliers, sound ethical conduct in dealing with suppliers is essential to the creation of long-term relationships and the establishment of supplier good will, it is impossible to claim professional status for procurement without reference to a consideration of its ethical aspects.

Businesses are increasingly doing business in a 'borderless' world, which makes it even more essential to develop core principles of conduct, which can then be applied to employees and suppliers worldwide – morally if not legally, Maina (2011). Companies that engage and assist their communities become valuable members of those communities and more respected by their stakeholder Ogachi, (2011). The approach an organisation takes to labour and supplier relations can determine whether or not they are seen as a 'good corporate citizen' or a 'good employer'.

### **Procurement Performance**

Procurement performance refers to efficiency and effectiveness in acquiring of goods and services in the procurement function in order to change from being reactive to being proactive to attain set performance levels in an entity. Procurement performance has several benefits to an organization like cost saving, reduced lead time, improved customer satisfaction, improved quality, reduced delivery time, and policy adherence and compliance to procurement regulations. Procurement activities have a relation to the organization's economic performance which is evident by cost reduction (Chopra et al., 2007). This can be divided to effects on turnover, gross profit, efficiency, total costs and organization's equity. All of these categories correlate directly with how the supplier ratings are controlled and utilized for the benefit of the organization (Cousins & Spekman, 2003). How the procurement is handled in an organization becomes highlighted when it has an effect on the competitive advantage. This concerns situations where the prices of materials fluctuate in short term, innovation is involved with the purchased products or the competition of the end-products is intense. According to Cummings and Qiao, (2008) choosing the supplier, product or subcontractor has an essential role in the potential growth of turnover.

Christopher (2005) distinguished features of a responsive organisation. Major transformations are; from functions to process, profit to performance, products to customers, inventory to information, and transactions to relationships. Critical measures of procurement performance need to be continuously monitored. The idea of 'Key Performance Indicators' (KPI) framework suggests that whereas there are many measures of procurement performance to be deployed in an organisation, only a small number of critical dimensions contribute more than proportionately to success or failure. A balanced score card can provide guidance on critical areas where action may be needed to ensure achievement of goals. Three key outcomes of success are: better, faster, and cheaper. Emphasis should be on search for strategies that provide superior value in the eyes of customers seeking greater responsiveness and reliability.

Van Weele (2006) maintained that there is a link between procurement process, efficiency, effectiveness and performance. Procurement performance starts from purchasing efficiency and effectiveness in the procurement function in order to change from being reactive to being



proactive to attain set performance levels in an entity. Performance provides the basis for an organisation to assess how well it is progressing towards its predetermined objectives, identifies areas of strengths and weaknesses and decides on future initiatives with the goal of how to initiate performance improvements. Procurement performance is not an end in itself but a means to control and monitor the procurement function

### Methodology

Research design is a process aimed at answering the research question and solve the research problem (Ngechu,2010). Alternatively research design is viewed as nature and outlook of the type of research applied. The study will use descriptive research design. Descriptive research is used to obtain information concerning the relationship between the independent and the dependent variables, it also describes the current status of the phenomena, and it describes "what exists" with respect to variables or conditions in a situation. Descriptive research aims to gather data without any manipulation of the research context and it is non-intrusive and deals with naturally occurring phenomena, where the researcher has got no control over the variables (Mugenda & Mugenda, 2012). The population of this study comprise staff members from finance, supplies, pharmaceutical and administration departments in CGH because of their direct involvement in procurement, the four departments have a total of 74 staff members. CGH is the second largest health facility in Kenya hence it has been selected because of the many procurement activities that are going on in a bid to transform the health sector. This study targets a sample size of 63 respondents that represents 85% of target population. Mugenda and Mugenda (2003), contended that in descriptive studies, a sample of at least 10% of the population is recommended as a good representation. Ogachi (2011) argued that the use of a reasonable sample is appropriate because it is quick, inexpensive, efficient and accurate means of assessing information about the population. Thus 85% is representative for data for analysis. The regression equation assumed the following form:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where

Y = Procurement performance (dependent variable)

$\beta_0$  = Constant of Regression

$\beta$  =The Beta coefficients for the corresponding X (independent) terms, representing the net effect the variable has on the dependent variable, as X's in the equation remain constant.

X<sub>1</sub> = Staff training

X<sub>2</sub> = Adoption of Communication Information Technology

X<sub>3</sub>= Supplier management

X<sub>4</sub>= Ethical Practices

$\epsilon$  = Error of Regression

### Research Findings

#### Effect of staff training on procurement performance in Coast General Hospital

The researcher wanted to establish the effect of staff training on procurement performance in Coast General Hospital (CGH).

Respondents were asked on a scale of 1 to 5 (where 5= strongly agree while 1 = strongly disagree) to establish the effect of staff training on procurement performance. They agreed to the statement that training programs are necessary in our organization with a mean of 3.56, SD=.570. Further respondents agreed that experience has made staff to be more effective in service delivery with a mean of 4.05 and SD=0.95. Respondents also agreed that their organization conducts regular staff development programs with a mean of 4.31 and SD=0.540. They also agreed that staff training is facilitated in the organization with a mean of 4.11 and SD=0.685. Respondents agreed that mentoring in their organization is done consistently with a mean of 4.11 and SD= 0.737.

This implies that majority of the respondents' believe that staff training greatly affect the performance of procurement practices within an organization. The findings are in line with Saunders (2007) who believed that successful functioning of organizational structures and

**Table 4.1. Effect of Staff Training.**

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Training programs are necessary in our organization	55	3	5	3.56	.570
Our organization conducts regular staff development programs	55	3	5	4.31	.540
Experience has made staff to be more effective in service delivery	55	2	5	4.05	.951
Staff training is facilitated in the organization	55	2	5	4.11	.685
Mentoring in our organization is done consistently	55	3	5	4.11	.737
Valid N (listwise)	55				

**Table 4.2. Effect of Information Communication Technology.**

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Procurement function has adopted e-procurement	55	1	3	2.51	.946
Local Area Network / Wide Area Network is in place in our organization	55	2	5	4.35	.865
Vendor Managed Inventory Systems are used in our organization	55	1	4	2.92	.898
E-procurement has reduced procuring cost	55	2	5	2.34	1.026
Both buyers and sellers are willing to use e-procurement	55	2	5	4.05	.870
Valid N (listwise)	55				

**Table 4.3. Effect of Supplier Relationship Management.**

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
There is long-term relationship with our customer	55	2	5	4.02	.757
Increases reliability of suppliers due regular interactions with the buyer	55	3	5	4.15	.678
Payment of suppliers is made in time	55	2	5	4.00	.694
Supplier appraisals are done regularly	55	2	5	4.09	.752
Suppliers are highly motivated due to good relationship with the buyer	55	2	5	3.93	.766
Valid N (listwise)	55				

effective operation of planning control systems is dependent on the quality and ability of staff employed. Thus training staff enables them perform better. Leenders and Fearon (2002), Goetsch & Davis, (2006). Agree that investing in the training of staff can help improve their performance eventually improving procurement performance.

#### Effect of ICT on Procurement Performance in CGH

The researcher further studied the effects of information communication technology on procurement performance in CGH.

The study sought to determine the effect of information communication technology on the performance of procurement practices Using a scale of 1-5 where (5=strongly agree and 1=strongly disagree) respondents were asked to give their views. Respondents disagreed that procurement function has adopted e-procurement with a mean of 2.51, SD=0.946. However, respondents agreed that Local Area Network / Wide Area Network is in place in our organization with a mean of 4.35 SD=0.865. Respondents disagreed that Vendor Managed Inventory Systems are used in their organization with a mean of 2.92 SD=0.898. They further disagreed that e-procurement has reduced procuring cost with a mean of 2.34 and SD=1.026. However, respondents agreed that both buyers and sellers are willing to use e-procurement with a mean of 4.05 and SD=0.870

From the findings a few statements explain lack of availability of e-procurement and vendor management statements at CGH. This gave an indication that the systems have not been used due to their unavailability. However, a few statements gave an indication that ICT infrastructure is in place. These findings imply that ICT greatly affects the performance of procurement practices. The findings are in line with Daugherty, Myers and Autry (1999), who asserts that ICT is an enabler for information sharing which organizations in the procurement system can use for eliminating bloated inventory levels caused by cumulative effect of poor information management practices. Simatupang and Sridharan (2005) emphasized that information is the glue that holds organizations together and can be used to integrate procurement process activities both within a process and across multiple processes. Further, Sriram and Stump (2004) agree that enterprise resource planning (ERP) systems are essential for supporting internal information sharing while Thomas and Rainer (2005) asserted that procurement systems have long been supported by ICT. Kenth and Vahid (2008) found that ICT drives e-markets to increase the availability of information about suppliers who are made available for

each product and increase market interest for parties, reduce procurement costs and support paperless transactions. It enables users to buy at lower prices worldwide.

#### Effect of Supplier Management on Procurement Performance of CGH

The researcher sought to study supplier management on procurement performance of CGH.

Respondents were asked to give their views on the effect of supplier management on performance of procurement practices. From a scale of 1-5 where (5=strongly agree and 1=strongly disagree) Respondents agreed that there is long-term relationship with their customer with a mean of 4.02, SD=0.757. They also agreed that supplier management increases reliability of suppliers due regular interactions with the buyer with a mean of 4.15 and SD=0.678. Respondents further agreed that payment of suppliers is made in time with a mean of 4.00, and SD= 0.694. They also further agreed that supplier appraisals are done regularly with a mean of 4.09, and SD=0.752. Respondents also agreed that suppliers are highly motivated due to good relationship with the buyer with a mean of 3.93, and SD=0.766. This implies that supplier relationship affects procurement performance in public hospitals. The study confirms with Lysons and Farrington, (2012), Peters (2011) statements that consider supplier relationship management as an integral aspect in improving supplier management performance thus procurement practices. They also indicate that SRM managers should be responsible for managing no more than three supplier relationships, in order to devote sufficient time to each. Chopra et al, (2007) also explains that supplier involvement in product development allows firm to make better use of their suppliers capabilities and technology to deliver competitive products

#### Effect of Ethical Practices on Procurement Performance in CGH

The researcher further wanted to investigate the effect of ethical practices on procurement performance in CGH. The study sought to identify the effect of ethical practices on procurement performance. Respondents were asked to give their views in a scale of 1-5 where (5=strongly agree and 1=strongly disagree) Respondents agreed to the statement that tendering is transparent with a mean of 4.16 and SD=0.688. They also agreed that supplier's business information is usually held confidential with a mean of 4.31 and SD=0.858. Respondents agreed that reduces conflict of interest with a mean of 3.78, and SD=0.712. They also agreed

**Table 4.4. Effect of Ethical Practices.**

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Tendering is transparent	55	2	5	4.16	.688
Supplier's business information is usually held confidential	55	2	5	4.31	.858
Reduces conflict of interest	55	3	5	3.78	.712
Suppliers are paid promptly	55	2	5	4.24	.637
Promotes good reputation of our organization and profession	55	2	5	3.95	.731
Valid N (listwise)	55				

**Table 4.5 Procurement Performance.**

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Suppliers deliver quality goods	55	2	5	3.98	.952
There is improved relationship between the buyer and supplier (s)	55	2	5	4.04	.719
There is reduced delivery time	55	2	5	4.09	.752
Procurement unit operates at a minimum cost	55	3	5	3.98	.593
Organisation gets value for money on purchases	55	2	5	4.11	.629
Valid N (listwise)	55				

that that suppliers are paid promptly with a mean of 4.24, and SD=0.637. they further also agreed that the organization promotes good reputation of our organization and profession with a mean of 3.95, and SD=0.731. The study findings conforms with statement by (Lysons and Farrington, (2012), (Peter and Bailey 2005) explaining that ethical standards of an organization are judged by its actions and the actions of its employees, not by pious statements of intent put out in its name. Armstrong and Sweeney (2004) and Trevino & Weaver, (2003) further states that suppliers' confidential information must not be disclosed to any third party or used in any way without the consent of the supplier. This implies that ethical issues within an organization are essential to its performance.

#### Performance of Procurement Practices

The researcher investigated the performance of procurement practices. Respondents were asked to give their views on the general performance of procurement practices at CGH.

The finding above indicates that procurement performance is very crucial for the running of an organization. Respondents agreed to the statement above given the scale of 1-5 where (5=strongly agree and 1=strongly disagree). Respondents agreed that, Suppliers deliver quality goods with a mean of 3.98 and SD=0.952. Respondents also agreed that there is improved relationship between the buyer and supplier (s) with a mean of 4.04 and SD=0.719. Respondents agreed that there is reduced delivery time with a mean of 4.09 and SD=0.752. They further agreed that procurement unit operates at a minimum cost with a mean of 3.98 and SD=0.593. Respondents further also agreed that organization gets value for money on purchases with a mean of 4.11 and SD=0.629.

#### Coefficient of Determination ( $R^2$ )

**Table 4.6. Coefficient of Determination ( $R^2$ ).**

Model Summary			
Model	R	Adjusted R Square	Std. Error of the Estimate
1	.747 <sup>a</sup>	.558	.27298

a. Predictors: (Constant), Ethical practices, staff training, ICT, Supplier management

Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the

change in the independent variables or the percentage of variation in the dependent variable that is explained by all independent variables. Table 4.6 shows that the coefficient of determination R Square is 0.558. From the findings it implies that 55.8% of procurement performance at CGH is attributed and determined by combination of the four independent factors that is ethical practices, staff training, ICT and Supplier management. The 44.2% represents other factors not researched in this study.

#### Anova

**Table 4.7. ANOVA.**

ANOVA <sup>a</sup>					
Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	4.706	4	1.177	15.788	.000 <sup>b</sup>
Residual	3.726	50	.075		
Total	8.432	54			

- a. Dependent Variable: Procurement performance  
b. Predictors: (Constant), Ethical practices, staff training, ICT, Supplier management

Analysis of Variance (ANOVA) was used to establish the significance of the regression model from which f-significance at the value of (P) is less than 0.05. The study model was statistically significant in predicting factors affecting procurement performance of public hospitals in Kenya. From table 4.7 the Df value is (4, 50) at significant level of 0.00 thus less than the (P) value of 0.05. This implies that the regression model had a confidence level of above 95% hence high reliability of the results obtained. The null hypothesis therefore is rejected and an alternative one adopted. The result in table 4.7 further indicates that the study findings were statistically obtained.

#### Correlation Analysis

The researcher used Pearson correlation to identify the relationship between procurement performance and the four independent variables in the study. Table 4.8 indicates that there was a strong positive correlation between staff training and procurement performance ( $r=0.506$ , and P value of 0.00). The value implies that staff training greatly and positively influences the procurement performance in the public hospitals. The study also found out that there was a strong and positive correlation between procurement performance and information communication technology with ( $r=0.498$ , and a P value of 0.000) portraying a strong significant relationship between procurement performance and ICT in

**Table 4.8. Correlation Analysis.**

		Correlations				
		Staff training	ICT	Supplier management	Ethical practices	Procurement performance
Staff training	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	55				
ICT	Pearson Correlation	.571 <sup>**</sup>	1			
	Sig. (2-tailed)	.000				
	N	55	55			
Supplier management	Pearson Correlation	.318 <sup>*</sup>	.376 <sup>**</sup>	1		
	Sig. (2-tailed)	.018	.005			
	N	55	55	55		
Ethical practices	Pearson Correlation	.107	.410 <sup>**</sup>	.643 <sup>**</sup>	1	
	Sig. (2-tailed)	.435	.002	.000		
	N	55	55	55	55	
Procurement performance	Pearson Correlation	.506 <sup>**</sup>	.498 <sup>**</sup>	.668 <sup>**</sup>	.432 <sup>**</sup>	1
	Sig. (2-tailed)	.000	.000	.000	.001	
	N	55	55	55	55	55

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

**Table 4.9. Multiple Regression Analysis.**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1.(Constant)	3.762	1.031		.779	.258
Staff training	.761	.585	.602	2.455	.002
ICT	.685	.069	.210	.349	.060
Supplier management	.834	.365	.609	2.969	.000
Ethical practices	.717	.537	.575	2.210	.003

a. Dependent Variable: Procurement performance

The public hospitals. The study further found out that there was a strong and positive correlation between supplier management and procurement performance with ( $r=0.668$ , and a P value of 0.000) implying that supplier management affects performance of procurement practices in public hospitals. Lastly the study found out that there was a positive correlation between ethical practices and performance of procurement practices with a ( $r=0.432$  and a P value of 0.001).indicating that ethical practices has a positive correlation with procurement performance in public hospitals.

#### Multiple Regressions

The researcher conducted a multiple regression analysis as shown in Table 4.9 to determine factors affecting the procurement performance in public hospitals. The study investigated the effect of staff training, ICT, supplier management and ethical practices on procurement performance. The regression equation was:

$$Y = 3.762 + 0.761X_1 + 0.685X_2 + 0.834X_3 + 0.717X_4 + \epsilon$$

Where

$\beta_0$ : Constant term,

$\beta_n$ : Coefficients to be determined

$\epsilon$ : Error term.

Y: Dependent variable (Procurement performance)

X1: Staff training

X2: ICT

X3: Supplier management

X4: Ethical practices

From the regression equation established in Table 4.9, the study found out that when all independent variables (staff training, ICT, supplier management, ethical practices) are kept constant at zero the procurement performance of public hospitals will be at 3.762. A one unit change in staff training will lead to 0.761 increases in procurement performance of public hospitals. Also a one unit change in ICT will lead to 0.685 increases in the procurement performance of public hospitals. Further, a one unit change in supplier management will lead to 0.834 increases in the procurement performance of public hospitals and one unit change in ethical practices will lead to 0.717 increase in the procurement performance of public hospitals. This study concludes that supplier management contributes more to procurement performance of public hospitals. To test for the statistical significance of each of the independent variables, it was necessary to test at 5% level of significance and 95% level of confidence of the p values and from Table 4.8 the staff training had a 0.002; ICT showed a 0.060 level of significance, supplier management showed a 0.000 level of significance and ethical practices had a 0.003 level of significance. Therefore, the most significant factor was supplier management. Staff training, supplier management and ethical practices had a positive and significant effect on the procurement performance at CGH where their significant value was less than 0.005. However,

ICT had insignificant effect on procurement performance at CGH since its significant value was more than 0.005.

#### Conclusions

The study established that staff training greatly affect procurement performance in public hospitals. These hospitals are expected to provide excellent services to the citizenry in an efficient and effective manner. To that effect, public hospitals are implementing scalable staff training programmes to enhance service delivery. There is also realization by the employees in public hospitals that there is need to regularly develop their careers in order to enhance improved procurement performance. Officials conducting procurement need to be able to demonstrate the highest professionalism in making fair and equitable decisions. This can only be enhanced by having them being highly professionally trained and qualified.

The study also concludes that information communication and technology affects performance of public hospitals. The study shows that ICT have a significant influence of performance of public hospitals. Increasing levels of ICT by a unit would increase the levels of performance of public hospitals. ICT factors such as level of compliance, installation of Local Area Network(LAN), ICT infrastructure and e-procurement to a large extent affects performance of public hospitals. The study recommends for management of public hospitals should embrace effective supplier management strategies in order to enhance performance of public hospitals in Kenya.

Also, the study concludes that supplier management affected procurement performance to a very great extent. The supplier management has a positive significant effect on procurement performance of public hospitals. This implies that increasing levels of supplier management by a unit would increase the levels. This shows that supplier management has a positive effect on procurement performance of public hospitals. Supplier management factors such as rate of appraising suppliers, supplier selection strategies, supplier relationship management, and payment of suppliers affects procurement performance of public hospitals.

Effective professional ethical practices should be adopted, better supplier prompt payment should be made, effective transparency and accountability should be exercised and all employees in the public hospitals should uphold the principle of confidentiality in their respective line of duty. In regard to procurement professionals, the suppliers' information should be kept confidential.

Nevertheless, based on the summary of findings, the following conclusions were made: having a trained and well qualified staff and effective supplier management systems are crucial for enhanced public procurement performance. On the other hand, failure to embrace ethical practices and non-

adoption of ICT systems impacted negatively on procurement performance.

### Recommendations

The study recommends that management should ensure that adequate training is provided for all employees and stakeholders involved in implementing procurement policies and procedures. Lack of training brings issues such as resistance to adopt change, fear of technology, poor work ethics and poor decision making.

The study recommends that management of public hospitals should ensure that public hospitals effectively integrate procurement practices with ICT based systems through application of e-procurement methods, use of automated procurement systems; implementation of supportive ICT infrastructure for encouraging adoption of ICT based procurement systems and training of procurement staff on ICT skills to enhance their procurement performance.

The study also recommends for management of public hospitals should embrace effective supplier management strategies in order to enhance performance of public hospitals in Kenya. Effective supplier appraisal techniques should be adopted, better supplier selection strategies should be used, effective supplier selection process should be employed, better supplier performance methods should be applied, effective supplier relationship management techniques should be adopted and supplier development and supplier collaboration should be employed.

The study also recommends that public hospitals in Kenya need to adopt a culture of transparency and fairness so as to reduce corruption and restore public confidence. All the undertaken procurement practices should not be fraudulent and a high level of transparency should be maintained so as to avoid procurement of unnecessary and low quality goods and services.

### Suggestions for Further Studies

This study concentrated on the factors affecting procurement performance in Coast General Hospital. This study therefore suggests that in the future a study be conducted across all major public hospitals. This will enable the generalization of the findings across the country.

The study aimed at identifying the factors affecting the performance of procurement in public hospitals with special interest in staff training, ICT, supplier management and ethical issues in procurement. These factors are not exhaustive and hence further research needs to be done to identify other variable that can identify other factors not mentioned in the study.

A similar study can be done with special interest in private firms. Equally, further research should be carried out in other public procurement entities to ascertain whether these findings are universal. Furthermore, a research on challenges that hinder procurement performance in public hospitals should be carried out as this was not the objective of this study

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